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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/942,787	08/29/2001	Henry Scanzano	9209-12	9756
20792	7590	11/28/2003	EXAMINER	
MYERS BIGEL SIBLEY & SAJOVEC			CHEN, TE Y	
PO BOX 37428			ART UNIT	
RALEIGH, NC 27627			PAPER NUMBER	
2171				
DATE MAILED: 11/28/2003				

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b>	<b>Applicant(s)</b>	
	09/942,787	SCANZANO ET AL.	
	<b>Examiner</b>	<b>Art Unit</b>	
	Susan Y Chen	2171	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) Responsive to communication(s) filed on 02 November 2001.
- 2a) This action is FINAL.                    2b) This action is non-final.
- 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) Claim(s) 1-48 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) Claim(s) \_\_\_\_\_ is/are allowed.
- 6) Claim(s) 1-48 is/are rejected.
- 7) Claim(s) \_\_\_\_\_ is/are objected to.
- 8) Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) The specification is objected to by the Examiner.
- 10) The drawing(s) filed on 29 August 2001 is/are: a) accepted or b) objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. §§ 119 and 120

- 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) All b) Some \* c) None of:  
1. Certified copies of the priority documents have been received.  
2. Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 13) Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.  
a) The translation of the foreign language provisional application has been received.
- 14) Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

#### Attachment(s)

- 1) Notice of References Cited (PTO-892)                    4) Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_. *Qle*  
2) Notice of Draftsperson's Patent Drawing Review (PTO-948)                    5) Notice of Informal Patent Application (PTO-152)  
3) Information Disclosure Statement(s) (PTO-1449) Paper No(s) 2.                    6) Other: \_\_\_\_\_

## **DETAILED ACTION**

1. Claims 1-48 are presented for examination.

### ***Drawings***

The drawings are objected to because of the following informality:

Based on the citation of application's specification Fig (s). 1-2B are convention technical used by the art [e.g. see page 3, lines 8-10], however, the drawing itself fails to make any distinguish for this feature, since these drawings are inconsistent with the feature pointed by the specification, thus, they are objected by the examiner. A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

### ***Specification***

The disclosure is objected to because of the following informalities:

The current specification fails to define what is a "ERDs" or "EDR" at Page 3, line 10 and 21. Appropriate correction is required.

It is also noted that although the present specification contains line numbers in the specification and claims, the lines in the claims do not correspond to the preferred format. The preferred format is to number each line of every claim, with each claim

beginning with line 1. For ease of reference by both Examiner and Applicant all future correspondence should include the recommended line numbering.

The specification has not been checked to the extent necessary to determine the presence of all possible minor errors. Applicant's cooperation is requested in correcting any errors of which applicants may become aware in the specification.

***Claim Rejections - 35 USC § 101***

35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

Claims 1 and 36 are rejected under 35 USC 101, because the claimed invention is directed to non-statutory subject matter.

The basis of this rejection is set forth in a two-prong test of:

- (1) whether the invention is within the technological arts; and
- (2) whether the invention produces a useful, concrete, and tangible result.

For a claimed invention to be statutory, the claimed invention must be within the technological art. Mere ideas in the abstract (i.e., abstract idea, law of nature, natural phenomena) that do not apply, involve, use, or advance the technological art fail to promote the "progress of science and the useful arts" (i.e., the physical sciences as opposed to social sciences, for example) and therefore are found to be non-statutory

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subject matter. For a method claim to pass muster, the recited process must somehow apply, involve, use, or advance the technological arts.

As to technological arts recited in the preamble, mere recitation in the preamble (i.e., intended or field of use) or mere implication of employing a machine or article of manufacture to perform some of the recited steps does not confer statutory subject matter to an otherwise abstract idea unless there is positive recitation in the claim as a whole to breathe life and meaning into the preamble. In *Bowman* (*Ex parte Bowman*, 61 USPQ2d 1665, 1671 (BD. Pat. App. & Inter. 2001) (Unpublished)), the board affirmed the rejection under U.S.C. 101 as being directed to non-statutory subject matter. Although *Bowman* discloses transforming physical media into a chart and physically plotting a point on said chart, the Board held that the claimed invention is nothing more than an abstract idea, which is not tied to any technological art or environment.

In the present case, although claims 1 and 36 both recite an abstract idea at the preamble for providing multiple but exclusive relationship between tables in a relational database, however, the steps in the claim body merely associate a foreign key with a set of related tables base on at least one attribute of the record in a relating table, which can be implemented by the mind of a person or by the use of a pencil and paper. In another words, since the claimed invention, as a whole, is not within the technological arts as explained above, these claims only constitute an idea and does not apply,

involve, use, or advance the technological arts, thus, it is deemed to be directed to non-statutory subject matter.

***Claim Rejections - 35 USC § 112***

The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Claims 1-11 and 36-39, are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention.

As to claim 1, Applicant fails to disclose the mechanism as how to use the claimed foreign key to enforce the claimed multiple but exclusive relationships between tables in a relational database.

As to claim 36, Applicant fails to teach the technique being used for associating a type with records in the first table and the set of second tables. Furthermore, Applicant fails to show any link of enforcing a multiple but exclusive relationship between a plurality of tables via associating a type with the records of these tables.

As such, it is not enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention.

2. As to claims 2-11 and 37-39, these claims have the same defects as their base claims, hence are rejected for the same reason.

***Claim Rejections - 35 USC § 112***

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 36-48 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

As to claim 36, 40 and 45, it is not understood what is it meant by "associating a type with respective ones of the plurality of second tables" [i.e., what does the claimed "respective ones of the plurality of second tables" refer to? What type was used to associate the claimed respective ones of a plurality of second tables? And how to associate a type to the claimed respective ones of a plurality of second tables?]

As to claims 37-39, 41-44 and 46-48, these claims have the same defect as their base claims, hence are rejected for the same reason.

3. Because of the ambiguity nature of the invention, the following rejections are based on the examiner best understanding.

***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

- (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.
- (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. Claims 1-48 are rejected under 35 U.S.C. 102(b) as being anticipated by Jorgensen (U.S. Patent No. 5,933,831).

As to claims 12, 14 and 40, Jorgensen discloses a computer system with relational database management processing to provide multiple but exclusive relationships between tables [e.g. see Abstract, Fig(s). 2-4], wherein, the system comprising the followings as claimed by applicant:

- a) a relating (or type) table [e.g., table 200, Fig. 2] which have at least one attribute [e.g. the pop-up menu (226), Fig. 2] to provide a one-to-many relationship between the related table and a corresponding foreign key [e.g., the foreign key Icon(206), Fig. 2; col. 3, lines 56-65 & col. 4, lines 4-6; Fig. 4];
- b) a plurality of related tables [e.g., the set of hyperlinked tables being displayed by the step 306, Fig. 3; col. 3, lines 27-32, lines 56-65; col. 4, lines 14-19];

c) means for selectively associating a foreign key value of a record in the relating table with a specific one of related tables based on the attribute of the key [e.g. see the foreign key icon & trigger processing of Fig(s). 3A-3C].

As to claims 13,17-18, 20-23, 41-42 and 44, the claimed limitations are default properties of standard OO SQL processing. [e.g. an ordinary skill person in the art can use the "Create Table" SQL to define foreign key association between a set of tables, he/she also can use the "Create Type" SQL to define a plurality of types of foreign key association. In addition, a user can enforce the multiple and exclusive relationship between a set of tables via QQ SQL UDR (User Defined Routines or triggers). Furthermore, a build-in "Select (value/values) From (table/tables) Where (condition/conditions)" SQL can be used to select and identify (or obtain) records from a set of desired tables of a database].

As to claims 15, 19 and 43, Jorgensen further discloses using trigger to enforce association relationships between the set of foreign keys and related tables in a database [e.g., see Fig. 3C].

As to claim 16, Jorgensen further discloses that the system use a defined type (or hyperlink) to access the typed tables [e.g. see col. 3, lines 27-32].

As to claims 1-11, 24-39 and 45-48, these claims recite the same subject matters as claims 12-23 and 40-44 in form of computer method and computer products. As such, they are rejected for the same reason.

***Conclusion***

5. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure: Sharker (U.S. Patent No. 6,012,067) which discloses a system including method and apparatus for storing and manipulating objects in a heterogeneous database distributing environment; St John Herbert, III (U.S. Patent No. 6,366,917) which disclosed a method of modifying a populated database structure by modifying metadata describing the database structure.

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Susan Y Chen whose telephone number is (703) 308-1155. The examiner can normally be reached on Monday - Friday from 7:00-4:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Safet Metjahić can be reached on (703) 308-1436. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703)308-6296.

Susan Chen  
Nov. 20, 2003

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